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TECHNICAL MANUAL

ORDNANCE MAINTENANCE

PISTOLS AND REVOLVERS

December 29, 1941

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ORDNANCE MAINTENANCE

PISTOLS AND REVOLVERS

Prepared under direction of the Chief of Ordnance

	Paragraphs
Introduction	1
Distinguishing characteristics	2
Inspection of the pistol	3
Inspection of the Smith and Wesson revolver, M1917	4
Inspection of the Colt revolver, M1917	5
Inspection report	. 6
General instructions for maintenance	7
Instructions for repair of parts	٤
List of references	. 9

^{*}This pamphlet supersedes TR 1400-45A, Ordnance Maintenance Infantry and Aircraft Armament, December 13, 1927.



(TM 9-1295) - 2 -



- 3 - (TM 9-1295)



FIGURE 3 — COLT REVOLVER, CAL. .45, M1917 - LEFT SIDE VIEW



ORDNANCE MAINTENANCE

- 1. INTRODUCTION. This manual is published for the information and guidance of ordnance maintenance personnel. It contains instructions for inspection, disassembly, assembly, maintenance and repair of the automatic pistol, cal..45, M1911 and M1911Al; Colt revolver, cal..45, M1917; and Smith and Wesson revolver, cal..45, M1917, supplementary to the information contained in the references of paragraph 9. Additional descriptive matter and illustrations are included to aid in providing a complete working knowledge of the materiel.
- 2. DISTINGUISHING CHARACTERISTICS. The differences between the M1911 and M1911Al automatic pistols do not affect the maintenance of the weapons. Organizations called upon to repair M1911Al pistols will make reference to the automatic pistol, cal..45, M1911.
- 3. INSPECTION OF THE PISTOL. Parts to be inspected, Poin
 in order of inspection

 \underline{a} . The pistol as a unit.

- \underline{b} . Barrel bushing. \underline{c} . Recoil spring.
- d. Main-spring
- housing.

 e. Sear spring.
 - f. Sear.
 - g. Hammer.
 - h. Disconnector.
 - Trigger.
 - j. Receiver.
 - k. Slide.
 - 1. Firing pin.

Points to be observed

- a. General appearance, action of slide, smoothness of operation, function of safety lock, grip safety, slide stop, and magagine catch. Alinement of sights, split stocks, missing stock screws. Trigger pull.
 - b. Burrs.
 - c. Tension.
- \underline{d} . Burrs, tension of main spring.
- \underline{e} . Tension and broken leafs.
 - f. Worn nose.
- g. Worn sear notch, broken hammer strut.
 - h. Burred or worn.
 - 1. Burred or bent.
- j. Burrs, loose ejector.Defaced markings.
- \underline{k} . Burrs on recoil guideways and locking recesses.
 - 1. Short or worn.

Parts to be inspected, in order of inspection

- Firing-pin spring. m.
- Extractor. n.
- Barrel. ٥.

Points to be observed

- Tension. m.
- Broken claw, weak. n.
- If the barrel is free 0. from pits and bulges, and lands are sharp and distinct, it is serviceable. If the barrel is pitted but free from bulges and has sharp lands, it is still serviceable and will be sufficiently accurate. This condition, however, implies that the barrel has not been given proper care. If the lands are pitted and have lost their sharpness, the barrel will be inaccurate and should be replaced. This condition is always due to neglect. If the lands are worn down, due to extensive firing, and therefore are no longer sharp, pits are to be expected as they are characteristic of a worn-out barrel which should be replaced. If the barrel has a bulge discernible to the eye when sighted through at a string held 2 or 3 feet front of the barrel, even though otherwise in good condition, it should be replaced. Burrs on muzzle.
- The magazine as р. a unit.
 - Magazine spring. q.
 - Magazine follower. r.
- 4. INSPECTION OF THE SMITH AND WESSON REVOLVER, M1917. -Parts to be inspected,

in order of inspection

The Smith & Wesson revolver as a unit.

Burrs and dents. р.

- Kinks and tension. q.
- Burrs. r.

General appearance, smoothness of operation. Func-

Points to be observed

ORDNANCE MAINTENANCE

Par	rts	to	bе	inspected,
in	ord	ler	of	inspection

Points to be observed tion by snapping hammer. Missing side plate screws. Examine frame carefully for cracks where barrel is screwed into frame. Defaced, markings.

- \underline{b} . Thumb piece.
- \underline{b} . Function, missing nut, burrs.

c. Crane.

- \underline{c} . Burrs, alinement. Number on crane should correspond with number on frame.
- d. Cylinder.
- \underline{d} . Burrs, rust, powder fouling, and pits.
- e. Ejector.

- \underline{e} . Burrs and alinement.
- f. Ejector spring.
- f. Tension.

- g. Center rod.
- \underline{g} . Function and tension of spring.

h. Hammer.

- \underline{h} . Smoothness of operation. Broken firing pin. Loose firing pin, rivet.
- i. Cylinder bolt.
- 1. Function, tension of spring. (Cylinder bolt should hold cylinder firmly in place when hammer is down, also when hammer is cocked.)

j. Stocks.

- j. Cracks, loose stock screw.
- k. Front sight.

k. Burrs and alinement.

1. Barrel.

- $\underline{1}$. Looseness in frame. (see par. 3 $\underline{0}$.)
- 5. INSPECTION OF THE COLT REVOLVER, M1917. Parts to be inspected,

in order of inspection

 \underline{a} . The Colt revolver as a unit.

Points to be observed

a. General appearance, smoothness of operation, missing side plate screws. Look carefully for cracks in frame where barrel is screwed in. Missing or burred crane lock and screw. Defaced markings.

Points to be observed

Parts to be inspected, in order of inspection

<u>b</u> .	Latch	\underline{b} . Smoothness of opera-
		tion. Tension of latch spring.
<u>c</u> .	Crane.	<u>c</u> . Burrs, alinement. Num-
		ber of crane should correspond
		with number on frame.
<u>d</u> .	Cylinder.	<u>d</u> . Burrs, rust, powder
		fouling, and pits.
<u>e</u> .	Ejector.	$\underline{\mathbf{e}}$. Burrs and alinement.
<u>e</u> . <u>f</u> .	Ejector spring.	$\underline{\mathbf{f}}$. Tension.
<u>g</u> .	Hammer.	\underline{g} . Smoothness of opera-
		tion. Broken firing pin.
<u>h</u> .	Cylinder bolt.	$\underline{\mathtt{h}}$. Function. Tension of
		spring. (Cylinder bolt should
		hold cylinder firmly in place
		when hammer is down, also when
		hammer is cocked.)
<u>i</u> .	Stocks.	 Cracks, loose stock
		screw.
<u>j</u> .	Front sight.	1. Burrs and alinement.
<u>k</u> .	Barrel.	\underline{k} . Looseness in frame.
		(see par. 3 <u>o</u> .)

- 6. INSPECTION REPORT. The procedure to be followed relating to inspection and maintenance is contained in TM 9-1100, "Ordnance Maintenance Procedure -- Materiel Inspection and Repair."
- <u>a</u>. In the absence of a prescribed inspection form covering pistols and revolvers, reports of inspection may be submitted on an improvised form showing a heading and form approximately as follows:

ORDNANCE MAINTENANCE

Report of Inspection of Ordnance Materiel

(0	rganization)	(Station)				
(Name of arm)	(Date)				
Serial		Corrective action to				
No.	Condition	be taken				
6784	O.K					
26763	Worn barrel	Exchange with Post 0.0.				
11212	Rusty barrel	Clean locally.				

 \underline{b} . This form is used by the corps area or division small-arms inspector in submitting reports upon the completion of inspections, and by organization commanders in reporting upon the completion of the "Corrective action" noted by the inspector. Four copies are made and distributed as follows: One copy to the corps area, division, or other ordnance officer under whose supervision the inspection is made, two copies to the organization commander responsible for the firearms inspected, and one copy retained for the inspector's files.

(Inspector)

c. The inspector will fill in the name of the firearm inspected, its serial number, condition, and corrective action to be taken. Where necessary corrections can be made within the organization, the inspector will consult with and advise the organization commander as to the proper methods to be followed. Where the corrections to be made are extensive, complicated, or of a technical nature, the inspector will so indicate in column under heading "Corrective action to be taken" and note that the firearm be sent to the post, camp, station, or field depot for replacement. The inspector's report will be quoted as authority for making the exchange. Should the inspection disclose that the firearm has been damaged or rendered unserviceable through causes other than fair wear and tear, the inspector will so state in the inspection report in order that necessary action may be instituted to place responsibility should his opinion be

sustained. After the corrections, as indicated by the inspector in column under heading "Corrective action to be taken" have been completed, the organization commander will forward one copy of the inspection report to the corps area, division, or other ordnance officer under whose supervision the inspection was made. One copy will be retained for the organization files.

- 7. GENERAL INSTRUCTIONS FOR MAINTENANCE. a. Maintenance of the pistol and revolver consists primarily of replacement of worn or broken parts. Detailed instructions for disassembly and assembly are not given here, as the instructions contained in the references are applicable and should be referred to.
- \underline{b} . Where parts or assemblies, or parts of assemblies, are broken or worn so as to render them unserviceable, they must be replaced from stock. Often only parts of the assembly will be worn or broken. Should it take more time to remove serviceable parts from the assembly than the parts are worth, the assembly should be scrapped.
- \underline{c} . In quantity overhauling of pistols and revolvers, care should be taken in disassembling that the parts of each be kept separate. Certain parts of the revolver, such as the crane, side plate, etc., are not interchangeable.
- \underline{d} . Where there are burrs on cams and smooth surfaces, the part can be made serviceable by removing the burrs. In removing burrs a very fine file is used, care being taken to remove as small amount of metal as possible. Where roughened surfaces are present on moving parts, an oil stone should be used.

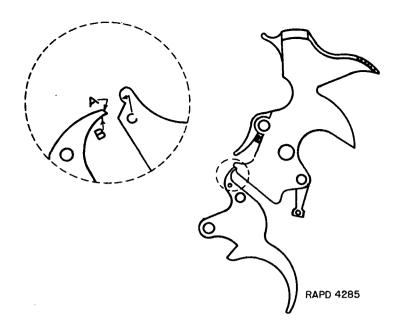


FIGURE 5 - HAMMER AND TRIGGER MECHANISM. COLT REVOLVER, CAL. .45, M1917

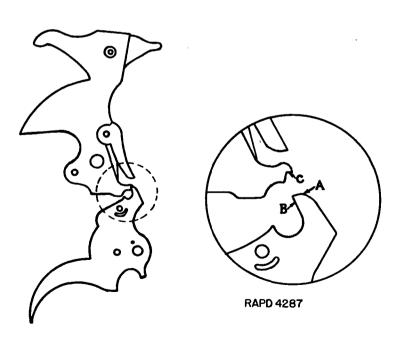


FIGURE 6 - HAMMER AND TRIGGER MECHANISM. SMITH & WESSON REVOLVER, CAL. .45, M1917

- 8. INSTRUCTIONS FOR REPAIR OF PARTS. a. Trigger pull. The trigger pull in single action should be between 5 and 6-1/2 pounds. A weak trigger pull is one which requires less than 5 pounds pressure on the trigger to release the hammer. A heavy trigger pull is one which requires more than 6-1/2 pounds on the trigger to release the hammer (single action).
- (1) To correct weak trigger pull (Colt). Weak trigger pull may be caused by a weak main spring, worn trigger, worn cock notch on the handle, or a combination of all three. To correct this condition, first stone the rear of the trigger and cock notch on the handle to correct relation. Polish surfaces "A" and "B" on the trigger and "C" on the hammer as shown in figure 5. Should this fail to produce the desired result, replacement of the main spring is necessary.
- To correct weak trigger pull (Smith & Wesson). First check the condition of the springs. Loosen the main spring strain screw until the main spring becomes loose in its seat in the frame. If serviceable, the main spring should become almost perfectly straight when all strain is relieved. If the main spring remains curved, considerably, a new spring should be installed. This will increase the trigger pull slightly. The rebound slide spring may be considered serviceable if it snaps the trigger forward smartly when pressed to the rear and released. Wear of the surface on the rear of the trigger and cock notch on the lower front projection of the hammer may cause a weak trigger pull. Such surfaces can be restored to their original shape by careful use of a fine file and polishing with a fine stone, provided the wear is not excessive. As shown in figure 6, polish surfaces "A" and "B" on the trigger and surface "C" on the hammer with a fine stone, being careful to remove as small amount of metal as necessary.
- (3) To correct heavy trigger pull. Heavy trigger pull is usually caused by dry, roughened surfaces or binding of the parts due to burrs or fouling. Polish the various surfaces with a fine stone and correctly lubricate the parts to remedy this condition.

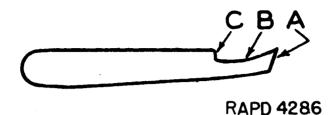


FIGURE 7 - HAND, COLT REVOLVER, CAL. .45, M1917

- <u>b.</u> <u>Hand (Colt).</u> To fit a new hand, it is sometimes necessary to stone the top surface "A" (fig. 7). Install the hand, and slowly cock the hammer, observing surfaces "B" and "C" (fig. 7). If surface "B" (fig. 7), does not clear the ratchet, the necessary clearance should be obtained by filing or stoning the surface. Surface "C" (fig. 7), if necessary, can be lowered by filing and stoning so that it will engage the lower side of its respective flange of the ratchet and continue the rotation of the cylinder. When the cylinder is stopped by the cylinder bolt, surface "C" (fig. 7), should be resting firmly underneath its flange of the ratchet.
- c. Ejector. To assemble a new ejector (with ratchet), first unscrew the old one from the ejector rod. Screw the new ejector on the rod until the end of the rod is approximately flush with the surface in the bored end of the latch pin seat in the ratchet. Aline the ejector so it will seat properly in the cylinder. Upset the rear end of the ejector rod with a punch sufficiently to prevent the unscrewing of the ejector.
- \underline{d} . Barrel. The barrel should be removed from the frame only for the purpose of tightening or replacement.
- (1) To tighten a loose barrel. First unscrew the barrel (in Smith & Wesson revolver, first remove the barrel pin before attempting to unscrew the barrel.) Clean the threads in the frame and on the barrel. Lightly peen the shoulder of the barrel which fits against the frame enough to tighten the barrel when it is screwed into its original position.
- (2) To replace the barrel. The replacement barrel should be selected so that a minimum amount of fitting is required to

obtain proper alinement. If necessary, a small amount of metal may be removed from the shoulder of the barrel with a fine file or by lathe to draw it up to alinement. When replacing the barrel, if necessary the rear end should be stoned to obtain the proper clearance between the rear end of the barrel and the front end of the cylinder. This clearance should be between .002 in. and .006 in.

- e. Rotational play in the cylinder (Smith & Wesson). The slight rotational play in the cylinder which develops after considerable firing is caused by wear of the cylinder bolt, and wear or increase in width of the latching notches around the rear of the cylinder. Replacement of the cylinder bolt will reduce this play. The latching notches may be reshaped by lightly peening the contact side. This peening must be limited to replacement of the metal pushed out to the side.
- f. Crane (Smith & Wesson). Replacement of the crane is seldom necessary. Burrs which might interfere with the latching of the cylinders in the firing position should be removed from the edges of the crane and the frame by stoning. If a new crane is to be fitted, considerable stoning is usually necessary on the surface of the crane which fits against the frame, to line up the cylinder with the bore.

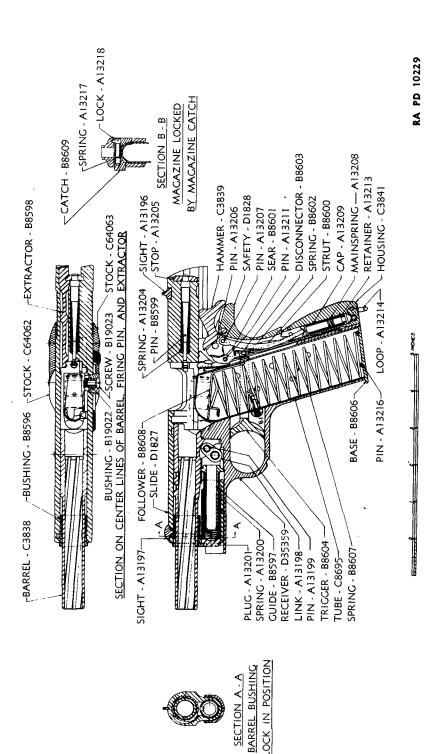
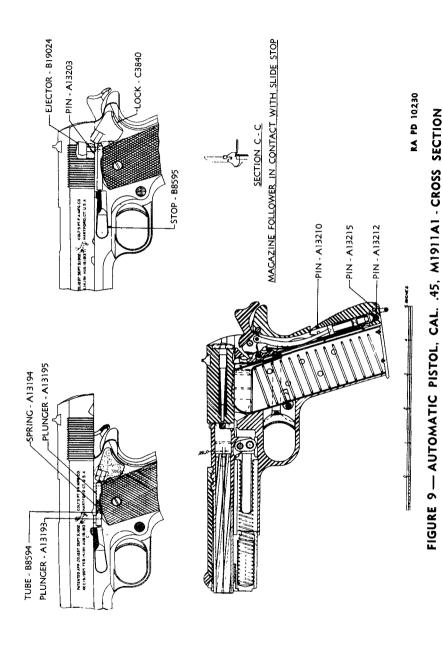


FIGURE 8 - AUTOMATIC PISTOL, CAL. .45, M1911A1 - CROSS SECTION



- 17 - (TM 9-1295)

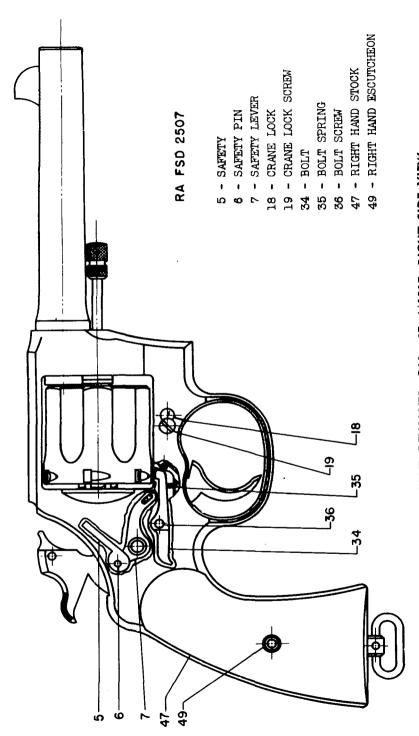
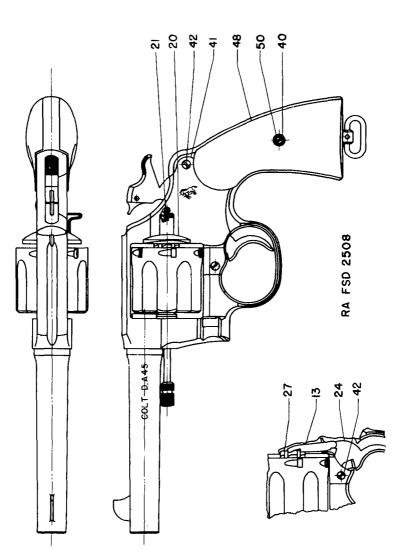


FIGURE 10 - COLT, REVOLVER, CAL. .45, M1917 - RIGHT SIDE VIEW



50 - LEFT HAND ESCUTCHEON

42 - SIDE PLATE SCREW 48 - LEFT HAND STOCK

21 - LATCH SPRING

20 - LATCH 13 - HAND

24 - TRIGGER

27 - RATCHET 40 - STOCK SCREW 41 - SIDE PLATE

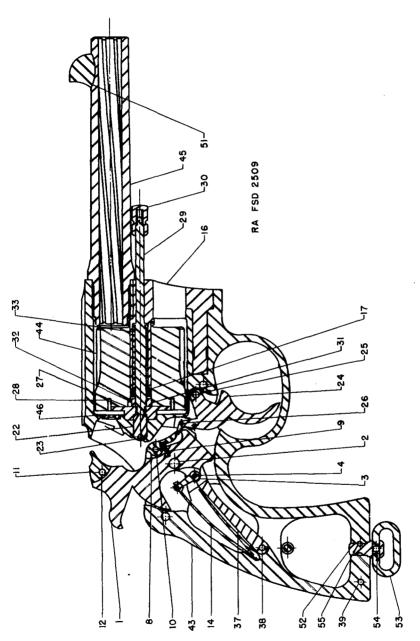


FIGURE 12 -- COLT, REVOLVER, CAL. .45, M1917 - SECTIONAL VIEW

	28 - RATCHET PIN	29 - EJECTOR ROD	30 - EJECTOR ROD HEAD	31 - EJECTOR ROD GUIDE BUSHING	32 - EJECTOR ROD GUIDE BUSHING PIN	33 - EJECTOR SPRING	37 - REBOUND LEVER	38 - REBOUND LEVER PIN
	14 - MAINSPRING	16 - CRANE	17 - CRANE BUSHING	22 - LATCH PIN	23 - LATCH PIN STUD	24 - TRIGGER	25 - TRIGGER PIN	26 - TRIGGER AND SAFETY PIN
FIGURE 12	1 - HAMMER	2 - HAMMER PIN	3 - HAMMER STIRRUP	4 - HAMMER STIRRUP PIN	8 - STRUT	9 - STRUT SPRING	10 - STRUT PIN	11 - FIRING PIN

21 –

46 - RECOIL PLATE 51 - FRONT SIGHT BLOCK 52 - SWIVEL STUD

44 - CYLINDER 45 - BARREL

43 - FRAME

53 - SWIVEL RING 54 - SWIVEL RIVET 55 - STUD RIVET

39 - STOCK PIN

27 - RATCHET

12 - FIRING PIN RIVET

(TM 9-1295)



FIGURE 13 - COLT, REVOLVER, CAL. .45, M1917 - PARTS

- PIN - 28

CYLINDER-44

RATCHET - 27

SPRING-21

BUSHING-17

CRANE-16

LATCH - 20

RA PD 2511

FIGURE 14 -- COLT, REVOLVER, CAL. .45, M1917 - PARTS

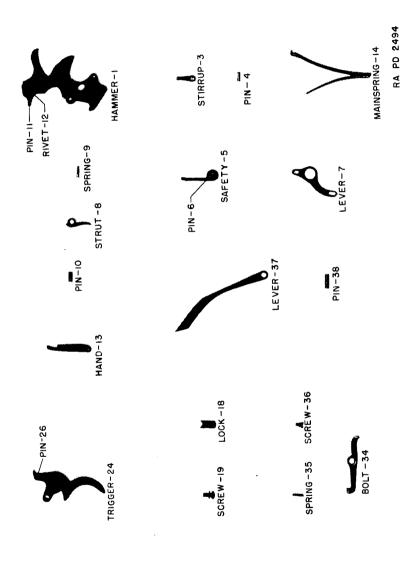
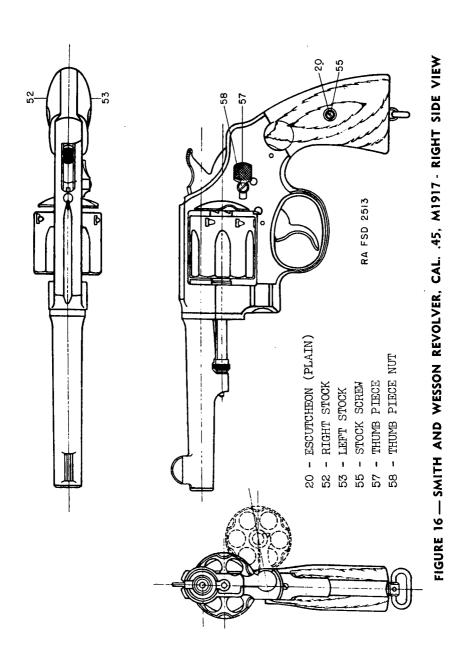


FIGURE 15 -- COLT, REVOLVER, CAL. .45, M1917 - PARTS



- 25 - (TM 9-1295)

FIGURE 17 — SMITH AND WESSON REVOLVER, CAL. .45, M1917 - SECTIONAL VIEW

FIGURE 17

MAINSPRING REBOUND SLIDE	40 - REBOUND SLIDE SPRING	48 - RECOIL PLATE	54 - STOCK PIN	56 - STRAIN SCREW	59 - TRIGGER	60 - TRIGGER PIN	61 - TRIGGER LEVER	62 - Trigger lever pin	63 - CENTER ROD BUSHING	64 - EJECTOR POSITIONING PIN	
31 - HANTER STRUT PIN 32 - HANTER STRUT SPRING 33 - HAND	5 - manu 4 - HAND PIN	55 - HAND LEVER	36 - HAND LEVER PIN	37 - HAND LEVER SPRING	38 - LATCH	39 - LATCH PLUNGER	40 - LATCH PLUNGER SPRING	41 - LOCKING BOLT	42 - LOCKING BOLT PIN	47 - LUCKING BOLT SPRING	
15 - CYLINDER BOLT PLUNGER SCREW 31 - HAMMER STRUT PIN 16 - EJECTOR 32 - HAMMER STRUT SPRI 17 PTECHOD COLLAD	EJECTOR PLUNGER	19 - EJECTOR SPRING 3	22 - FRAME 34	24 - FIRING PIN 3	25 - FIRING PIN RIVET 36	26 - HAMMER 35	27 - HAMMER PIN 40	28 - HAMMER STIRRUP 4.	29 - HAMMER STIRRUP PIN 41	30 - HAMMER STRUT	.NG
1 - BARREL 2 - BARREL PIN 3 - Difform electron Accommon V	4 - BUTT SWIVEL PIN	5 - CENTER ROD	6 - CENTER ROD SPRING	7 - CRANE	8 - CRANE STOP PIN	9 - CRANE STOP SPRING	10 - CYLINDER	11 - CYLINDER BOLT	12 - CYLINDER BOLT PIN	13 - CYLINDER BOLT PLUNGER	14 - CYLINDER BOLT PLUNGER SPRING
		_	. 2	7	_	((TM	19	-1.	29:	5)

FIGURE 18 — SMITH AND WESSON REVOLVER, CAL. .45, M1917 - PARTS

ROD - 5

SPRING-6

PLUNGER-18

BUSHING-63

EJECTOR - 16

CYLINDER-10

COLLAR-17

CRANE-7

AWWWWWA SPRING-19

RA PD 2495

FIGURE 19 - SMITH AND WESSON REVOLVER, CAL. .45, M1917 - PARTS

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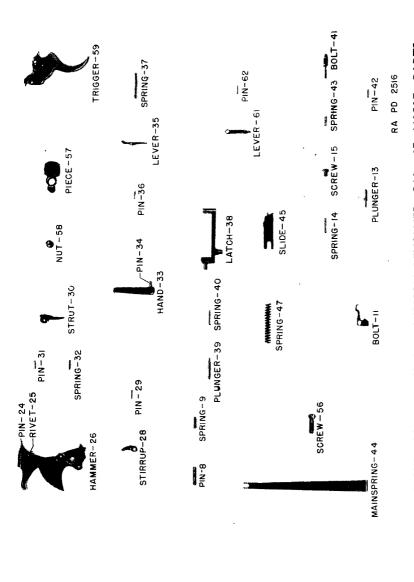


FIGURE 20 - SMITH AND WESSON REVOLVER, CAL. .45, M1917 - PARTS

9. LIST OF REFERENCES a. Standard Nomencla	ture Lists
Pistol, automatic, cal45, M1911 and M1911Al	SNL B-6
Revolver, Colt, cal45, M1917; Revolver,	
Smith and Wesson, M1917	SNL B-7
Tools, special repair, small and hand arms, and	
pyrotechnic projectors	SNL B-20
Truck, small arms, repair, Ml	SNL G-72
Cleaning, preserving and lubricating materials,	
recoil fluids, special oils, and similar items	
of issue	SNL K-1
Soldering, brazing and welding materials, gases	
and related items	SNL K-2
Current Standard Nomenclature Lists are as tabulated	
here. An up-to-date list of SNL's is maintained as	
the "Ordnance Publications for Supply Index"	OPSI
b. Field Manuals	
Automatic pistol, cal45, M1911 and M1911A1	FM 23-35
Revolver, Colt, cal45, M1917, and revolver,	
Smith and Wesson, cal45, M1917	FM 23-36
c. <u>Technical Manuals</u>	
Cleaning and preserving materials	TM 9-850
Materiel inspection and repair	TM 9-1100
/19 000	

(AG 062.11 TM 9-1295 (12-8-41)PC-C)

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